



Auditory Neuropathy

Patient and Family Education

This teaching sheet contains general information. Please talk with your child's doctor or pediatric audiologist to get more specific information. Call **813-262-1330** to schedule an appointment.

What is auditory neuropathy?

- It's a hearing loss that occurs when sound enters your child's ear normally, but the information about the sound does not get sent properly from the inner ear to the brain.
- It can affect people of all ages (infants to adults).
- Your child may be able to hear sounds, but not understand what is said.

What are the risk factors for auditory neuropathy?

- Premature birth
- Low birth weight
- Jaundice requiring a blood transfusion
- Artificial ventilation
- Lack of oxygen during the birth process
- Having someone else in your family with auditory neuropathy
- Neurological disorders
- Hearing nerve deficiency

What are the possible symptoms of auditory neuropathy?

Your child may have one or more of these:

- May appear to hear one day, but not the next day
- May have good listening days and bad listening days
- May have normal hearing to profound hearing loss
- Difficulty understanding what someone says
- Difficulty understanding people when it's noisy

What causes auditory neuropathy?

Auditory neuropathy is not fully understood. Researchers believe that there may be damage to the inner hair cells (hair cells in the inner ear that send sounds to the hearing nerve) and/or bad connections between the inner hair cells and the hearing nerve.

How is auditory neuropathy diagnosed?

An audiologist will diagnosis it by doing one or all of the following tests:

- Auditory Brainstem Response (ABR) evaluation – to test how the hearing nerve reacts to sounds
- Otoacoustic Emissions – to test how the inner ear reacts to sounds
- Acoustic Reflexes – to test how a muscle in the ear reacts to a loud sound
- Hearing test – to test what sounds your child can hear at many different pitches in a sound-treated booth

Does auditory neuropathy get better or worse over time?

- Some children's symptoms seem to improve over time
- Other children seem to make little progress even with treatment
- If auditory neuropathy is going to improve, it usually improves by the end of the 1st year of life
- It's important to follow-up and complete testing as directed by your doctor

What treatment options are available for auditory neuropathy?

While there is no cure for auditory neuropathy, there are some listening devices that may help your child.

- Hearing aid: A hearing aid makes sounds louder for your child. Sometimes wearing a hearing aid seems to help children with auditory neuropathy. For other children, they seem to hear the same with or without their hearing aids.
- Cochlear Implant: A cochlear implant is an electronic device that provides a sense of sound to a person. It is surgically placed in the inner ear. Most times a cochlear implant seems to help children hear well because it is able to make the inner ear communicate better with the brain regarding what sounds are heard.
- FM system: An FM system brings a person's voice directly to your child's ear. This helps make speech clearer especially when it gets noisy.

What are the best ways to communicate with my child who has auditory neuropathy?

- Some children will be able to learn language by listening and speaking.
- Other children will benefit from learning sign language to communicate.
- Others may use a combination of both speaking and sign language so that they have access to all the information possible.
- The choice to communicate using one method verses another can be a difficult decision. What is right for one family may not be right for another family.